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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,844	10/19/2004	Hitoshi Ohmura	OHMURA10	6265

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EXAMINER	
ENIN-OKUT, EDU E	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
05/11/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/511,844	OHMURA ET AL.	
	Examiner	Art Unit	
	Edu E. Enin-Okut	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-28* is/are pending in the application.

4a) Of the above claim(s) *26-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

SURFACE TREATED STEEL SHEET FOR BATTERY CASE, BATTERY CASE AND BATTERY USING THE CASE

Detailed Action

1. The amendments filed on January 29, 2010 were received. Applicant has added new claims 26-28.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

3. Newly submitted claims 26-28 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Applicant has received previous examination of a claimed product, a surface treated steel sheet for a battery case, as presented in claims 23-25. However, newly submitted claims 26-28 are drawn to a method of manufacturing a surface treated steel sheet for a battery case.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 26-28 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Currently, claims 23-25 are pending.

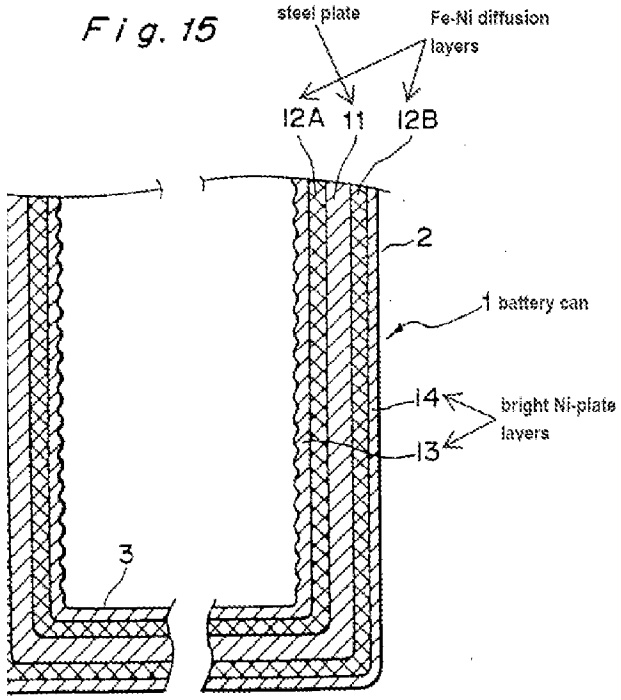
Claim Rejections - 35 USC § 103

3. Claims 23, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirofumi et al. (US 5,576,113) in view of Omura et al. (JP 02-129395 A) and Younan et al., "Effect of heat treatment

on electroless ternary nickel-cobalt-phosphorus alloy", Journal of Applied Electrochemistry, 32: 439-446, 2002, is maintained. The rejection is repeated below for convenience.

Regarding claims 23 and 24, Hirofumi teaches a steel plate 11, processed into a battery can 1, that serves as a substrate for Fe-Ni diffusion layers 12A,12B disposed on both sides of the plate and bright Ni-plated layers 13,14 disposed on the outer side of each Fe-Ni diffusion layer (Abstract; 7:29-55; Figs. 15, 24; see the labeled figure below).

Labeled figure from Hirofumi:



Hirofumi does not teach the use of a nickel-cobalt-phosphorus alloy as an uppermost layer.

Omura teaches coating both surfaces of a steel sheet with a Ni plating and/or a Ni-Fe alloy plating, and forming an upper layer of a Ni-P alloy on at least one side, to produce a sheet with high hardness and excellent in flaw resistance, workability and corrosion resistance (Abstract). Younan teaches that a Ni-Co-P alloy coating exhibits electrochemical and physical characteristics (e.g., hardness and corrosion resistance) superior to that of a Ni-P alloy (p. 439).

Thus, it would have been obvious to form a nickel-cobalt-phosphorous alloy as an uppermost layer on the inner side of the steel sheet used to form the battery case of Hirofumi in the manner taught by Omura and Younan because both Omura and Younan teach that use of coating layers as described above produces a workable steel sheet with a hard, corrosion resistant inner surface.

Regarding claim 25, Younan teaches that the nickel-cobalt-phosphorous layer contains from 5-30 wt. % cobalt and 1-12 wt. % phosphorous as shown in Table 2 (p. 440).

Response to Arguments

4. Applicant's arguments filed January 29, 2010 have been fully considered but they are not persuasive. In sum, applicant argues the following in its remarks:

> (a) "... Applicants respectfully that submit Hirofumi cannot be combined with Omura and Younan to arrive at the claimed subject matter, because Hirofumi teaches away from the concept of the placing a nickel-cobalt-phosphorus alloy layer as the uppermost layer (as required in the main claims), and thus it teaches away from the combination. ... it is clearly essential in Hirofumi to place the Ni plate as the uppermost layer, not a nickel-cobalt-phosphorus alloy layer, as required in claim 23 and new claim 26. See the disclosure at columns 25 and 26 of Hirofumi. Since Hirofumi teaches that the Ni plate must be used as the uppermost layer, the reference teaches away from the concept of the placing a nickel-cobalt-phosphorus alloy layer as the uppermost layer (as required in the main claims), ..." (see p. 8-9);
>
> (b) "... Omura al. and Younan do not disclose or suggest the battery performance after conducting a deep draw forming method to form a battery case as required by both product claims 23-25 and method claims 26-28 of the present application." (see p. 10); and,
>
> (c) "... Omura teaches in the paragraph "one side plating/both sides plating" on page 4 that "for instance, in the case of using Ni plating and/or Ni-P alloy plating to a battery case such as alkaline manganese cell and Ni-Cd cell, in order to deal with damages on a battery case while at work, only Ni plating layers is formed at the inner side of cylinder state case with bottom and Ni plating layer, and Ni-P alloy plating layers are formed at the outer side of the case. ... As such, it is believed that Omura, similar to Hirofumi, actually teaches away from the concept of a nickel- cobalt-phosphorus layer positioned at the uppermost layer of the inner surface for a battery case as recited in main claims 23 and 26. ..." (see p. 11-12)

5. As to applicant's argument (a) above, first, it is noted that the majority column 25, and all of column 26, of the Hirofumi reference it encompassed its recited claims. Second, it is also noted that

applicant has neither cited any portion of this reference that "teaches away from the concept of the placing a nickel-cobalt-phosphorus alloy layer as the uppermost layer" as contended by applicant; nor, has it provided any factually-supported evidence to underpin this argument. Further, as discussed in the rejections above, one of ordinary skill in the art would readily appreciate that a Ni-Co-P layer placed on either a nickel, or a nickel-iron, coated steel-sheet improves the hardness and corrosion-resistance of the nickel, or a nickel-iron, coated steel sheet, as taught by the combination of the Hirofumi, Omura and Younan references.

6. As to applicant's argument (b) above, first, it should be noted that applicant's claims are drawn to *a surface treated steel sheet for a battery case*, not a battery [emphasis added]. Thus, arguments regarding how a battery performs do not appear to be applicable. Second, it is also be noted that the features upon which applicant relies (i.e., battery performance and a deep draw forming method) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). (Further, it should also be noted that the method of forming a device is not germane to the issue of patentability of the device itself.)

7. As to applicant's argument (c) above, applicant refers to specific portions of the Omura reference. However, it is noted that this reference is a Japanese patent application publication; and, applicant has not provided a translation of relevant portions of the reference upon which its arguments are based. Without the ability to review a translation, these arguments have not been considered.

8. Also, in response to applicant's arguments with respect to the Hirofumi, Omura and Younan references individually, one cannot show nonobviousness by attacking references individually where the

rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Edu E. Enin-Okut** whose telephone number is **571-270-3075**. The examiner can normally be reached on Monday to Thursday, 7 a.m. - 3 p.m. (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available

through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edu E. Enin-Okut/
Examiner, Art Unit 1795

/Dah-Wei D. Yuan/
Supervisory Patent Examiner, Art Unit 1795